

TQ

THE
QUINTESSENCE

INTERNET OF THINGS

The Knowledge Magazine from EBV Elektronik



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About a technology that
changes society

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THE INTERCONNECTED
 WORLD: A MEGA-MARKET

The Internet of Things – interconnecting objects, data, processes and people – long ago ceased to be merely a future vision, and is now a reality. IT company Cisco estimates that products and solutions relating to the Internet of Things today already generate sales of some 613 billion US Dollars worldwide.

Yet despite those impressive numbers, the Internet of Things is very much in its infancy. It is estimated that currently just one percent of all machines have online capability. The remaining 99 percent – some 1.5 trillion machines of various kinds – remain to be connected. That represents an enormous market potential. The market analysts at IDC predict that by the year 2015 the Internet of Things will comprise 15 billion intelligent machines. Cisco's forecast of 25 billion interconnected machines by that time is even more optimistic; and by 2020 the number is expected to rise to 50 billion. According to the Cisco Internet of Everything Value Index, the biggest drivers of value growth through the Internet of Things this year are logistics (158.8 billion Dollars) and services (145.3 billion Dollars).

The rapid growth offers major opportunities for manufacturers of the machines and components concerned. At the heart of the technology is machine-to-machine (M2M) communication, and consequently that is where particularly strong demand is being seen. According to British analysts Machina Research, communications technology is dominated by two sectors: consumer electronics and building automation. Near-field communication is playing a key role in developments. More than 70 percent of machines are interconnected by technologies such as Wi-Fi. But mobile communications technology is also set to grow strongly. Machina Research predicts that by 2022 it will be providing around 2.6 billion machine connections. By comparison, the 2011 figure was 146 million. The key sector for these wide-area mobile networks is the automotive industry, which is forecast to account for some 60 percent of all such connections.

Manufacturers of sensors and microprocessors will also profit from the Internet of Things, too, however. One of the by-products of the boom in "intelligent" components and machines will be huge growth in global data volumes. This "Big Data" will in turn demand appropriate hardware and middleware solutions to enable it to be utilised efficiently and productively.

International mobile communications industry association GSMA estimates that by the year 2020 revenues from sales of network-connected machines and associated services will total 2.5 trillion US Dollars. At the same time, the Internet of Things will cut business costs by a further two trillion US Dollars, through direct savings, as well as based on more efficient services.

So we are at the threshold of a new market trend which offers enormous potential. In order to share in it, market players will need innovative electronic components as well as specific know-how relating to the Internet of Things. EBV offers both – and so can support you in developing the right solutions for the interconnected world of tomorrow.



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Slobodan Puljarevic
 President & CEO, EBV Elektronik



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Dear Reader,



It seems likely that the NSA data privacy scandal will long be a subject of media focus and political debate. Many people are uncertain about how they want to use the Internet in future. And we choose just such a time to publish a new publication on the "Internet of Things"?
Yes - especially now! Because the thoroughly justified debate surrounding PRISM, Tempora and XKeyscore should not lead us to turn our backs on the interconnected world. The opportunities offered by the Internet of Things are far too great. Because fitting out everyday objects with sensors, microprocessors and communication modules and



interlinking them over the Internet creates endless possibilities for making life easier, more comfortable and more efficient. The latest issue of "The Quintessence" presents a number of examples: Healthcare systems are made more efficient; the risk of road traffic accidents is reduced; factories become more flexible, and buildings more energy-efficient. In our interview with Professor Carlo Ratti, a leading expert on smart cities, he explains how the Internet of Things will change people's day-to-day interaction with their environment.

Indeed, the impact on our lives of the "normal" Internet over the last 20 years appears to be merely a precursor to the change which the Internet of Things will bring: The participants in our round-table discussion are all agreed that such an interconnected world will fundamentally change society, and even our political structures. All of this is no mere vision; most of the applications described in the Internet of Things publication have already been turned into reality. Concerns about security and data protection must not be ignored of course. But nor should they give cause to shut ourselves off from one of the major technological trends of our time.

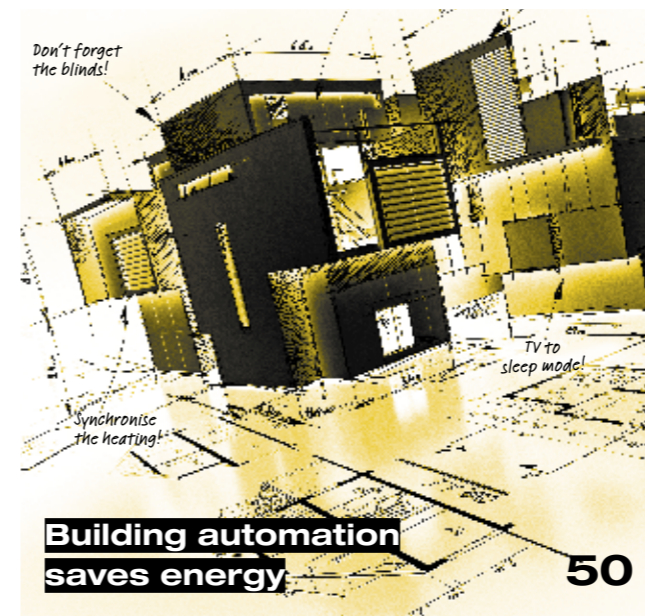
I very much hope you enjoy reading this issue. The Internet of Things is essentially dependent on new, creative ideas. Perhaps you will gain inspiration from this latest issue of TQ to come up with some solutions of your own for the interconnected world. As ever, I look forward to receiving your feedback.

You can contact me at bernd.schlemmer@ebv.com.

Best regards,

Bernd Schlemmer
Vice President Communications, EBV Elektronik





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